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EXAMINER

LAMB, BRENDA A

ART UNIT

PAPER NUMBER

1734

DATE MAILED: 02/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/802,495

Applicant(s)

BENJAMIN ET AL.

Examiner

Brenda A. Lamb

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 38 and 40-73 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 57-65 and 73 is/are allowed.
- 6) ☒ Claim(s) 38, 40-56 and 66-72 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 42-56 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The originally filed specification fails to teach or suggest a floating potential electrode, arranged upstream from the device, which receives an electrical field from the electrode arrangement and imparts an electric field to the moving substrate.

The originally filed specification fails to teach or suggest a magnetic field device may work with electrode arrangement which is arranged in an upstream side of the applicator unit or as a stand alone device to impart a magnetic field to the application medium in the curtain as it travels toward substrate U.

If applicant disagrees then applicant needs to point out support in the specification and/or drawings for a floating potential electrode, arranged upstream from the device, which receives an electrical field from the electrode arrangement and imparts an electric field to the moving substrate. If applicant disagrees then applicant needs to point out support in the specification and/or drawings for a magnetic field

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device which may work with electrode arrangement which is arranged in an upstream side of the applicator unit or as a stand alone device to impart a magnetic field to the application medium in the curtain as it travels toward substrate U.

Claims 42-56 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is unclear how the recitation of a floating potential electrode further limits claim 42 which is directed to a device for applying a medium since applicant recites that the floating potential electrode is upstream from the device. Claim 41 is confusing since it unclear how the electrode arrangement arranged upstream of the applicator unit relates to the electrode arrangement set forth in claim 38. Claim 72 is confusing since it unclear how the electrode relates to the electrode electrode arrangement set forth in claim 66.

The proposed drawing correction and/or the proposed substitute sheets of drawings filed on 12/12/2005 have been disapproved because they introduce new matter into the drawings. 37 CFR 1.121(a)(6) states that no amendment may introduce new matter into the disclosure of an application. The original disclosure does not support the showing of a magnetic field device which is arranged on the downstream side of the applicator unit and upstream of electrode arrangement 46.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 38, 40-42, 45-47 and 49 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Ord et al 5,290,600.

Ord et al teaches a device for applying a medium onto one side of a moving substrate, comprising: an applicator unit as shown in Figure 1 is arranged at a distance from the substrate, the applicator unit discharging the application medium onto the substrate as a free application medium jet thereby reading on a jet nozzle applicator unit, the applicator unit being kept at a first predetermined electric potential, the substrate proximate to the applicator unit being kept at a second predetermined electric potential, earthed or grounded, thereby producing an electric field, which exerts a force

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on the application medium jet as it moves from the applicator unit to the substrate, the force assisting in the movement of the application medium jet, wherein the substrate is one of a surface of a material web and a surface of a transfer roll wherein the applicator unit is a curtain applicator unit, the application medium jet being an application medium curtain that discharges the application medium onto the substrate, the application medium curtain moves from the curtain applicator unit to the substrate substantially under the force of gravity. Ord et al teaches that the electrode arrangement 25 is arranged near the nozzle to "modify" the electric field which would infer to one skilled in the art that the electrode arrangement 25, having an earth potential or of the same polarity but lower voltage than the nozzle, would alter or modify the electrical potential of the curtain as it travels from the applicator to the substrate. In any event, it would have been obvious that the electrode arrangement 25, having an earth potential or of the same polarity but lower voltage than the nozzle and arranged adjacent the Ord et al nozzle, would have obviously altered or modified the electrical potential of the curtain as it travels from the applicator since Ord et al teaches the electrode arrangement 25, arranged adjacent the curtain and at the same polarity but lower voltage than the nozzle, modifies the electric field and obviously modifies the electric field such that the curtain is under the influence of electric field having lower electrical potential or voltage from the electrode arrangement 25. Note the examiner has interpreted for examination purposes that the electrode arrangement set forth in claim 41 is the same electrode arrangement set forth in claim 38. Ord et al shows the electrode arrangement 25 is capable of being arranged upstream of the applicator unit and the electrode

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arrangement 25 is at a third predetermined electric potential. Thus every positively claimed element of the device as set forth in claims 38 and 40-41 is taught by Ord et al. With respect to claim 42, the same rejection applied to claim 38 is applied here. Ord et al further shows the apparatus an electrode arrangement 25 located on an upstream side of the applicator unit, the electrode arrangement proximate to the applicator unit and located at a distance from the substrate, the electrode arrangement being at a predetermined electrical potential thereby producing an electric field, which exerts a force on the application medium jet as it moves from the applicator unit to the substrate, the force assisting in the movement of the application medium jet. Thus, absent the new matter, every element of the claimed apparatus is taught by Ord et al. In any event, Ord et al device for applying a medium onto one side of a moving substrate is capable of arranged downstream of a floating potential electrode since it teaches every positively claimed element of the device, that is, an applicator unit and electrode arrangement. Note it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. Ex parte Masham, 2 USPQ 2d 1647 (1987). "[A]pparatus claims cover what a device is, not what a device does." Hewlett-Packard Co. v. Bausch & Lomb Inc., 909 F.2d 1464, 1469, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990). With respect to claim 45, Ord et al shows in Figure 1 an electric field producing device 25 located downstream of the application unit, the electric field producing device producing a force that is exerted on the application medium and directed toward the substrate. With respect to claim 46, Ord et al teaches in Figure 1

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that the electrodes positioned upstream and downstream exhibit a predetermined electrical potential. The functional recitation that the applicator unit and substrate is at a predetermined electric potential has not been given patentable weight because it is narrative in form. In order to be given patentable weight, functional recitation must be expressed as a "means" for performing the specified function, as set forth in 35 USC 112, 6th paragraph, and must be supported by recitation in the claim of sufficient structure to warrant the presence of the functional recitation. In re Fuller, 1929 C.D. 172; 388 O.G. 279. In any event, Ord et al teaches the substrate is grounded or earthed and the applicator unit includes a conducting surface 16 for providing a predetermined electric potential. With respect to claims 47 and 49, Ord et al teaches the substrate is grounded or earthed and the applicator unit includes a conducting surface 16 for providing a predetermined electric potential which is within the scope of the claim (see column 4 line 51-59).

Claim 48 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ord et al.

Ord et al is applied for the reasons noted above but fails to teach electrical potential is within the scope of the claim. However, it would have been obvious to optimize the electrical potential from the recited source in the Ord et al such that they are within the scope of the claim since it is within the scope of the claim since Ord et al teaches optimizing the electrical potential dependent on spacing between the nozzle and target or substrate (see column 2 line 63 to column 3 line 2).

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Claim 42 is rejected under 35 U.S.C. 102(b) as being anticipated by Sandiford et al.

Sandiford et al teaches the design of an apparatus for applying a medium onto a roll which is comprised of an applicator unit arranged at a distance from the roll and an electrode arrangement 5 located on an upstream side of said applicator unit, the electrode arrangement proximate to the applicator unit and located at a distance from the substrate, the electrode arrangement being at a predetermined electrical potential thereby producing an electric field, which exerts a force on the application medium jet as it moves from the applicator unit to the substrate, the force assisting in the movement of the application to medium jet. Sandiford et al is capable of capable of applying a liquid or pasty medium to one side of a substrate. Note it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. Ex parte Masham, 2 USPQ 2d 1647 (1987). "[A]pparatus claims cover what a device is, not what a device does." Hewlett-Packard Co. v. Bausch & Lomb Inc., 909 F.2d 1464, 1469, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990). Thus, absent the new matter, every element of the claimed apparatus is taught by Sandiford et al. In any event, Sandiford et al device for applying a medium onto one side of a moving substrate is capable of arranged downstream of a floating potential electrode since it teaches every positively claimed element of the device, that is, an applicator unit and electrode arrangement. Note it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate

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the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. Ex parte Masham, 2 USPQ 2d 1647 (1987). "[A]pparatus claims cover what a device is, not what a device does." Hewlett-Packard Co. v. Bausch & Lomb Inc., 909 F.2d 1464, 1469, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990).

Claim 42-43, 50 and 53 are rejected under 35 U.S.C. 102(b) as being anticipated by Kisler et al 4,489,672.

Kisler et al '672 teaches the design of an apparatus for applying coating to a moving substrate web which is comprised of an applicator unit arranged at a distance from the substrate, the applicator unit discharging the application medium onto the substrate as a free application medium jet, the applicator unit being kept at a first predetermined electric potential, the substrate proximate to applicator unit being kept at a second predetermined electric potential thereby producing an electric field, which exerts a force on the application medium jet as it moves from the applicator unit to the substrate, the force assisting in the movement of the application medium jet, wherein the substrate is one of a substrate of a material web. Kisler et al '672 teaches as shown in Figure 2A an electrode arrangement which includes elements 46, 48, 50, 52, 54, 56, 58 upstream to and proximate to the applicator unit and located at a distance from the substrate, the electrode arrangement being at a third predetermined electrical potential which exerts a force on the application medium jet as it moves from the applicator unit to the substrate, the force assisting in the movement of the application medium jet. Thus, absent the new matter, every element of the claimed apparatus as set forth in claim 42 is taught by Kisler et al '672. In any event, Kisler et al '672 device for applying

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a medium onto one side of a moving substrate is capable of arranged downstream of a floating potential electrode since it teaches every positively claimed element of the device, that is, an applicator unit and electrode arrangement. Note it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. Ex parte Masham, 2 USPQ 2d 1647 (1987). "[A]pparatus claims cover what a device is, not what a device does." Hewlett-Packard Co. v. Bausch & Lomb Inc., 909 F.2d 1464, 1469, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990). With respect to claim 43, Kisler et al '672 teaches the electrode arrangement includes a plurality of projections or bristles. With respect to claims 50 and 53, Kisler et al '672 teaches a backing element with electrode which is coupled to power supply 46 which acts as web guide element or roll which transfers or conveys the web material.

Claims 50-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kisler et al 4,489,672 in view of DE 197 33 333.

Kisler et al '672 is applied for the reasons noted above. Kisler et al fails to teach his apparatus includes a backing element in wiping contact with the electrode. However, it would have been obvious to modify the Kisler et al '672 apparatus by providing the electrical potential by arranging its backing element such that it is in wiping contact with the electrode such as taught by DE '333 since DE '333 discloses doing so in a coating apparatus.

Claims 55-56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kisler et al 4,489,672 in view of Miller et al.

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Kisler et al '672 is applied for the reasons noted above. Kisler et al '672 shows his applicator applies a bead to the substrate similar to Figure 1. Kisler et al '672 fails to teach his apparatus includes an attenuation device includes a suction device. However, it would have been obvious to modify the Kisler et al '672 apparatus by providing a suction device upstream of the applicator unit as well as a portion of the Kisler et al '672 electrode arrangement since Miller et al shows a vacuum chamber or suction device arranged upstream of the bead coater for applying coating onto a electrostatically substrate.

Claim 54 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kisler et al 4,489,672 in view Ankenbrand et al.

Kisler et al '672 is applied for the reasons noted above but fails to teach the use of a magnetic field device to also influence movement of the application medium. However, it would have been obvious to use the Kisler et al '672 bead coating apparatus to perform the process of manufacturing magnetic substrates by applying a magnetic coating on the substrate since the use of bead coaters to apply magnetic coating to manufacture magnetic substrates is old in the art as exemplified by Ankenbrand and use a magnetic field device in addition to the electrode arrangement extending upstream to assist in directing the application medium onto the substrate.

Claims 44 and 52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kisler et al 4,489,672 in view of Kisler 4,402,035

Kisler et al '672 is applied for the reasons noted above. Kisler et al '672 fails to teach the electrode arrangement includes a plurality of individual electrodes arranged

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adjacent to one another in a direction transverse in the substrate. However, it would have been prima facie obvious to arrange the Kisler et al '672 electrode arrangement which includes a plurality of individual electrodes such that the electrodes are adjacent to one another in a direction transverse in the substrate for the obvious reason to provide the electrostatic charge across the width of the substrate and especially in view of Kisler '035 shows as depicted in Figure 1A arranging the electrode arrangement in such as manner. With respect to claim 52, Kisler '035 shows in Figure 1A grounding of the roller opposite the electrode arrangement through the bearing shaft of the roller. Therefore, it would have been prima facie obvious to apply a charge using an electrode through the bearing shaft of the Kisler et al '672 roller 38 since Kisler '035 shows that the electrical potential applied to the roller in an electrostatic charging apparatus is applied through the bearing shaft.

Claim 48 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ord et al.

Ord et al is applied for the reasons noted above but fails to teach electrical potential is within the scope of the claim. However, it would have been obvious to optimize the electrical potential from the recited source in the Ord et al such that they are within the scope of the from the such that it is within the scope of the claim since Ord et al teaches optimizing the electrical potential dependent on spacing between the nozzle and target or substrate (see column 2 line 63 to column 3 line 2).

Claims 70-71 are rejected under 35 U.S.C. 102(b) as being anticipated by Coleman 4,060,649.

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Coleman teaches the design of an apparatus as depicted in Figure 1 for applying a medium onto at least one side of a moving substrate comprising: a curtain applicator unit that discharges the medium onto the substrate as a curtain the curtain moving from the curtain applicator unit to the substrate substantially under the force of gravity; and a plurality of edge guiding elements that guide lateral edges of the curtain, at least one of the edge guiding elements having a rough surface. Coleman teaches at column 4 lines 33-37 that the edge guiding elements, chains 34-35, are drawn in at a angle of from about 10 to 20 degrees from their normal vertical position thereby reading on the claimed limitation that the guide elements being angularly adjustable and displaceable in a direction transverse to the substrate. Coleman is capable of applying coating to a substrate within the scope of the claim since it teaches every claimed structural element of the apparatus. Note it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ 2d 1647 (1987). "[A]pparatus claims cover what a device is, not what a device does." *Hewlett-Packard Co. v. Bausch & Lomb Inc.*, 909 F.2d 1464, 1469, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990). Thus every structural element of the claimed apparatus as set forth in claims 70-71.

Claim 68 is rejected under 35 U.S.C. 103(a) as being unpatentable over Coleman 4,060,649.

Coleman is applied for the reasons noted above but fails to teach the edge guiding elements includes a wire or thread-like material. However, it would have prima

facie been obvious the Coleman edge guiding elements which are chains includes woven threads or wires since chains are conventionally constructed from woven threads or wires.

Claim 68 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ruschak et al 6,117,236 in view of Yapel et al 5,837,324.

Ruscak et al teaches the design of an apparatus for applying a medium onto at least one side of a moving substrates comprising: a curtain applicator unit that discharges the medium onto the substrate as a curtain the curtain moving from the curtain applicator unit to the substrate substantially under the force of gravity; and a plurality of edge guiding elements that guide lateral edges of the curtain, at least one of the edge guiding elements includes a wire or thread-like material. Ruschak et al teaches the surface of the edge guiding elements are metal and have good wettability but fails to teach the surface is roughened. However, Yapel et al teaches roughening the surface of a edge guiding element to increase the wettability of edge guiding elements (see column 6 lines 7-13). Therefore, it would have been obvious to modify the Ruschak et al apparatus by roughening the surface of its edge guiding elements to increase the wettability of edge guiding elements since Yapel et al teaches roughening the surface of a edge guiding element to increase the wettability of edge guiding elements (see column 6 lines 7-13).

Claim 66 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ord et al 5,290,600 in view of Coleman 4,060,649.

Ord et al teaches a device for applying a application medium onto one side of a moving substrate, comprising: a curtain applicator unit that discharges the application medium onto the substrate as a curtain, the curtain moving from the curtain applicator unit to the substrate substantially under the force of gravity; and an electrode arrangement altering an electric potential of said curtain as it moves from the curtain applicator unit to the moving substrate. Ord et al fails to teach the curtain coater includes a plurality of edge guiding elements that guide lateral edges of the curtain and fails to teach coating a substrate within the scope of the claim. Coleman is capable of applying coating to a substrate within the scope of the claim since it teaches every claimed structural element of the apparatus. Note it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. Ex parte Masham, 2 USPQ 2d 1647 (1987). "[A]pparatus claims cover what a device is, not what a device does." Hewlett-Packard Co. v. Bausch & Lomb Inc., 909 F.2d 1464, 1469, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990). Further, it would have been obvious to modify the Ord et al apparatus by providing at least one of the edge guiding elements having a surface being one of roughened such as taught by Coleman since Coleman teaches the use of edge guiding elements to guide the edge of the curtain. Thus claim 66 is obvious over the above cited references.

Claims 67, 69 and 72 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ord et al 5,290,600 in view of Coleman 4,060,649 and Ruschak et al 6,117,236.

Ord et al and Coleman are applied for reasons noted above. Ord et al and Coleman each fail to teach the edge guide is a metal and fail to teach wetting angle of the edge guide. However, it would have been obvious given the modifications of the Ord et al apparatus as discussed above to construct the edge guiding elements from a metal material within the scope of the claim since Ruschak et al teaches constructing the edge guide elements from a material within the scope of the claim for the taught advantage of good wettability. Further, it would have been obvious given the modifications of the Ord et al apparatus as discussed above with the metal edge guide elements that such guide elements are capable of providing a wetting angle within the scope of the claim dependent on the material being applied by the curtain coater. Thus claims 67 and 69 are obvious over the above cited references. With respect to claim 72, the examiner has interpreted for examination purposes that the electrode arrangement set forth in claim 66 is the same electrode set forth in the instant claim. Therefore, it would have been obvious given the modifications of the Ord et al apparatus as discussed above with the Coleman edge guide elements that the electrodes of the electrode arrangement 25 are positioned relative to guide elements in a manner within the scope of the claim in order to apply an electric field to the curtain.

Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

Applicant's argument that Ord et al fails to teach altering the electrical potential of the curtain as it travels from the applicator to the substrate is found to be non-persuasive. Ord et al teaches that there is an electric field all the way from the nozzle to

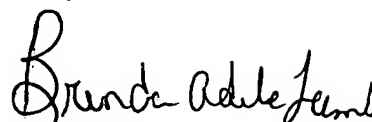
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the target. Ord et al teaches that the sheet or curtain of coating is projected past that the electrode arrangement 25 which is arranged adjacent the nozzle. Ord et al teaches that the electrode arrangement can be of earth potential or of the same polarity but lower voltage than the nozzle. Ord et al teaches that the electrode arrangement 25 is arranged near the nozzle to "modify" the electric field which would infer to one skilled in the art that the electrode arrangement 25, having an earth potential or of the same polarity but lower voltage than the nozzle, would alter or modify the electrical potential of the curtain as it travels from the applicator to the substrate. In any event, it would have been obvious that the electrode arrangement 25, having an earth potential or of the same polarity but lower voltage than the nozzle and arranged adjacent the Ord et al nozzle, would have obviously altered or modified the electrical potential of the curtain as it travels from the applicator since Ord et al teaches the electrode arrangement 25, arranged adjacent the curtain and at the same polarity but lower voltage than the nozzle, modifies the electric field and obviously modifies the electric field such that the curtain is under the influence of electric field having lower electrical potential or voltage from the electrode arrangement 25.

Claim 57-65 and 73 are allowed.

Any inquiry concerning this communication should be directed to Brenda A.

Lamb at telephone number (571) 272-1231. The examiner can normally be reached on Monday and Wednesday thru Friday with alternate Tuesdays off.


BRENDA A. LAMB
PRIMARY EXAMINER